Case 3572

PSITTACULINAE Vigors, 1825 (Aves): proposed conservation of usage

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Abstract. The purpose of this application, under Articles 78.1 and 80.2.2 of the Code, is to conserve current usage of the family-group name PSITTACULINAE Vigors, 1825 as valid for the Indo-Australasian long-tailed parrots. This would be effected by designation of the generic name *Psittacula* Cuvier, 1800 as its type genus. Suppression of the junior homonym *Psittacula* Kuhl, 1820, upon which PSITTACULINAE Vigors was originally based, will maintain stability in nomenclature. Suppression of the simultaneously published family-group name PALAEORNITHINAE Vigors, 1825, which was originally applied to the Indo-Australasian long-tailed parrots, is desirable as well.

Keywords. Nomenclature; taxonomy; Aves; PSITTACULINAE; *Psittacula*; PALAEORNITHI-NAE; *Palaeornis*; parrots; Africa; Asia; Indonesia; Australasia.

1. The long-tailed, often coral-billed parrots of tropical Africa, southern Asia,

Indonesia and Australasia comprise ca. 38 extant species (Dickinson, 2003, pp. 190–194) in a monophyletic assemblage of genera comprising *Psittacula* Cuvier, 1800, *Prioniturus* Wagler, 1832, *Psittinus* Blyth, 1842, *Tanygnathus* Wagler, 1842, *Geoffroyus* Bonaparte, 1850, *Eclectus* Wagler, 1832, *Alisterus* Mathews, 1911, *Aprosmictus* Gould, 1843 and *Polytelis* Wagler, 1832 (Smith, 1975, p. 43; Homberger, 1980, pp. 172–179, 184; Wright et al., 2008, p. 2148; Schweizer et al., 2010, p. 988). Whether at subfamily or tribal rank, this group has been known almost universally for over 50 years in mainstream ornithological literature and media by the family-group name PSITTACULINAE Vigors, 1825 (Verheyen, 1956; Smith, 1975; Wolters, 1975; Forshaw, 1978, 1981, 1989, 2002; Homberger, 1980, 2002; Campbell & Lack, 1985; Bock, 1994; Collar, 1997; Schodde, 1997; Higgins, 1999; Dickinson, 2003; de Kloet & de Kloet, 2005; Christidis & Boles, 2008; Mayr, 2008, 2010; Wright et al., 2008; Schweizer et al., 2010 and *Wikipedia*, 2011). The one exception known to us is Condon's (1975, p. 181) use of PALAEORNITHINAE Vigors, 1825 – see below.

2. Vigors (1825a, p. 400) introduced the subfamily PSITTACULINAE by indication (Article 12.2.4) in the spelling PSITTACULINA, and based it expressly and exclusively on Psittacula Kuhl (1820, pp. 8 - 9). Kuhl's (l.c.) Psittacula comprised 27 species of small, short-tailed parrots of the global tropics, including such diverse groups as the South American parrotlets (Forpus Boie, 1858), African lovebirds (Agapornis Selby, 1836) and southeast Asian hanging-parrots (Loriculus Blyth, 1850); no type species was designated. Excluded altogether were the larger Afro-Asian long-tailed parrots known today as Psittacula, together with their allied Indo-Australasian genera. That Vigors (1825a) intentionally kept the long-tails out of his PSITTACULI-NAE is clear because in the very paper in which he published PSITTACULINAE he placed the long-tails instead in a separate new subfamily, PALAEORNITHINAE (as PALAEORNINA, here corrected under Article 32.5.3.1). That name is also available by indication (Article 12.2.4). The type species of the type genus, Palaeornis Vigors, 1825, is Psittacus alexandri Linnaeus, 1758 (p. 97), by original designation (Vigors, 1825b, p. 46).

3. On through the 19th century, mainstream ornithological literature (Spix, 1824; Wagler, 1832; Swainson, 1837; Gray 1840, 1845; Finsch, 1868; Reichenow, 1881; Salvadori, 1891) continued to apply *Psittacula* to small, short-tailed parrots, focussing on the tropical American parrotlets. It also attributed the name variously to Brisson (1760, vol. 4, p. 384), Cuvier (unreferenced), Illiger (1811, p. 200) and Kuhl (1820, p. 8). Yet applications of Psittacula varied among these last four authors. That of Brisson is unavailable for zoological nomenclature (Opinion 37, Opinions Rendered by the International Commission on Zoological Nomenclature, Smithsonian Miscellaneous Publications 2013: 87-88, 1911; Direction 16, Opinions and Declarations 1(C): 81-88, 1955; Direction 105, BZN 20: 343-344, October 1963). That of Illiger, which attributed Psittacula to Cuvier (unreferenced), lacked a description, treated the name as a junior synonym of Psittacus Linnaeus, 1758, and did not associate any species directly with it. That of Kuhl, which treated Psittacula as a separate section of *Psittacus* Linnaeus, 1758, may be regarded as an independent, new name because Kuhl made no direct or unambiguous reference to any earlier usage. Only he, moreover, provided a generic description and unambiguous citation of all species that he included in Psittacula. One of these, the tropical American parrotlet Psittacus passerinus Linnaeus, 1758 (= Forpus passerinus (Linnaeus, 1758)),

was subsequently designated as its type species by G.R. Gray (1840, p. 53) who there attributed authorship of *Psittacula* to Kuhl alone by express reference.

4. Mathews (1917, p. 169) found that, as a name, Psittacula had been published earlier by Cuvier in 1800 on table 2, volume 1 of his Leçons d'Anatomie Comparée. It is available there under Opinion 39 (Opinions Rendered by the International Commission on Zoological Nomenclature, Smithsonian Miscellaneous Publications 2060: 91, 1912) and Direction 32 (Opinions and Declarations 1(C): 307-328, 1956). This Opinion makes available Latin names in the tables of volume 1 of the Leçons where they are identifiable, via French names, from specified references. The first listed of these specified references was Cuvier's own Tableau élémentaire d'Histoire Naturelle (1797). Contrary to Mathews (1917, p. 169), Psittacula Cuvier is not made available by reference to Psittacus alexandri (= Psittacus alexandri Linnaeus, 1758) and P. rufirostris (= Psittacus krameri Scopoli, 1769) in the Leçons, but by reference, through the French name "Perruches" used for Psittacula in the Leçons,

to those same nominal specific names in Cuvier's *Tableau* (pp. 237–238), cf. Article 12.2.5 of the Code. G.M. Mathews, 1925. The Birds of Australia. Supplements 4 & 5. Bibliography of the Birds of Australia Pts 1 & 2. vii, 149 pp. H.F. & G. Witherby, London. records on p. 30 that Cuvier's *Tableau elementaire* dated An. 6 was reviewed on (i.e. issued by) 24 December 1797, and that the *Lecons* dated 1800 (vols. 1 & 2) was reviewed on 19 April 1800. Mathews (1917) went on to confirm the application of *Psittacula* by designating the originally included *Psittacus alexandri* Linnaeus, 1758, as its type species, thereby making *Psittacula* Cuvier, 1800 a senior objective synonym of *Palaeornis* Vigors, 1825 (for which see para. 2 above).

5. Although Mathews's (1917, p. 169) action switched *Psittacula* from stubbytailed American parrots to long-tailed species in Afro-Asia, and displaced *Palaeornis* Vigors, which had been used for the latter for over 90 years, it was accepted by Peters (1937, p. 241) and, henceforth, by the rest of ornithology to this day. Along with it, the family-group name PSITTACULINAE Vigors was also switched to the Indo-Australasian long-tails (see para. 1 above), in the belief that its type genus was *Psittacula* Cuvier, 1800, not *Psittacula* Kuhl, 1820 (e.g. Bock 1994, p. 140). This shift, together with Bock's (1994) choice of PSITTACULINAE over PALAEORNITHINAE as first reviser (Article 24.2.2), displaced PALAEORNITHINAE Vigors as well.

6. The issue of the type genus of PSITTACULINAE Vigors falls under the jurisdiction of Article 65.2 of the Code. As matters presently stand, this in-use name is invalid because it is based on *Psittacula* Kuhl, 1820, a junior homonym of *Psittacula* Cuvier, 1800 (Article 39 of the Code). In its place, moreover, PALAEORNITHINAE Vigors is available and valid as the next senior family-group name for the Indo-Australasian long-tailed parrots despite Bock's (1944) First Reviser action. Yet reviving PALAEORNITHINAE for these parrots would, we believe, upset stability in nomenclature because it would mean more name shifting and would engender ongoing uncertainty about names drawn from *Psittacula* Cuvier and *Palaeornis* Vigors. So, we refer the case to the Commission to maintain PSITTACULINAE and *Psittacula* in their present usage.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:

(a) to conserve usage of the family-group name PSITTACULINAE Vigors, 1825 by ruling that its type genus is *Psittacula* Cuvier, 1800;

- (b) to suppress the family-group name PALAEORNITHINAE Vigors, 1825 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Psittacula* Cuvier, 1800 (gender: feminine), type species *Psittacus alexandri* Linnaeus, 1758, by subsequent designation of Mathews (1917), type genus of the family-group name PSITTACULINAE, as ruled in (1)(a) above;
- (3) to place on the Official List of Specific Names in Zoology the name alexandri Linnaeus, 1758, as published in the binomen *Psittacus alexandri* Linnaeus, 1758, specific name of the type species of *Psittacula* Cuvier, 1800;
- (4) to place on the Official List of Family-Group Names in Zoology the name PSITTACULINAE Vigors, 1825, type genus *Psittacula* Cuvier, 1800, as ruled in (1)(a) above;

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PALAEORNITHINAE Vigors, 1825, junior objective synonym of PSITTACULINAE Vigors, 1825, by the First Reviser action of Bock (1994), as suppressed in (1)(b) above.

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The application has been reviewed by the Standing Committee on Ornithological Nomenclature of the International Ornithological Committee.

References

- Bock, W.J. 1994. History and nomenclature of avian family-group names. Bulletin of the American Museum of Natural History, 222: 1-281.
- Brisson, M.-J. 1760. Ornithologie ou méthode contenant la division des oiseaux en ordres, sections, genres, especes et leurs variétés, vol. IV. 576, liv pp. J.-B. Bauche, Paris.
- Campbell, B. & Lack, E. (Eds.). 1985. A dictionary of birds. 670 pp. Buteo Books, Vermillion, SD.
- Christidis, L. & Boles, W.E. 2008. Systematics and taxonomy of Australian birds. 277 pp. CSIRO Publishing, Melbourne.
- Collar, N.J. 1997. Family Psittacidae, Parrots. Pp. 280-477 in del Hoyo, J., Elliot, A. & Sargatal, J. (Eds.), Handbook of the birds of the world, vol. 4. Lynx Edicions, Barcelona.
- Condon, H.T. 1975. Checklist of the Birds of Australia Part 1 Non-passerines. xx, 311 pp. Royal Australasian Ornithologists Union, Melbourne.
- Cuvier, G. 1797 (as An. 6). Tableau élémentaire de l'Histoire Naturelle des Animaux. xvi, 710 pp., XIV pls. Badouin, Paris.
- Cuvier, De G. 1800 (as An. VIII). Leçons d'anatomie comparée, Tome 1. xxxi, 521 pp., 9 tables. Badouin, Paris.
- de Kloet, R. & de Kloet, S. 2005. The evolution of the spindlin gene in birds: sequence analysis of an intron of the spindlin W and Z gene reveals four major divisions of the Psittaciformes. *Molecular Phylogenetics and Evolution*, **36**: 706–721.
- **Dickinson, E.C.** (Ed.). 2003. *The Howard and Moore complete checklist of the birds of the world*, 3rd Ed. 1039 pp. Christopher Helm, London.

Finsch, O. 1868. Die Papageien, Monographisch bearbeitet, Bd. 2. vii, 996 pp. E.J. Brill, Leiden.

- Forshaw, J.M. 1978. Parrots of the world, Ed. 2. 616 pp., 158 pls. Lansdowne Editions, Melbourne.
- Forshaw, J.M. 1981. Australian parrots, Ed. 2. 312 pp., 56 pls. Lansdowne Editions, Melbourne.

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- Forshaw, J.M. 1989. Parrots of the world, Ed 3. Lansdowne and Kevin Weldon, New South Wales.
- Forshaw, J.M. 2002. Australian Parrots, Ed 3. Robina Press, Queensland.
- Gray, G.R. 1840. A list of the genera of birds, with an indication of the typical species of each genus. viii, 80 pp. R. & J.E. Taylor, London.
- Gray, G.R. 1845. The genera of birds, vol. 2. iv, 301–483 pp. Longman, Brown, Green, and Longmans, London.
- Higgins, P. (Ed.). 1999. Handbook of Australian, New Zealand and Antarctic birds, vol. 4. Parrots to dollarbird. 1248 pp. Oxford University Press, Melbourne.
- Homberger, D.G. 1980. Funktionell-morphologische Untersuchungen zur Radiation der Ernährungs – und Trinkmethoden der Papageien (Psittaci). Bonner Zoologische Monographien, 13: 1–192.
- Homberger, D.G. 2003. The comparative biomechanics of a predator-prey relationship: The adaptive morphologies of the feeding apparatus of Australian black-cockatoos and their foods as a basis for the reconstruction of the evolutionary history of Psittaciformes. Pp. 203–228 in Bels, V.L., Gasc, J.-P. & Casinos, A. (Eds.), Vertebrate Biomechanics and Evolution. BIOS Scientific Publishers, Oxford.

- Illiger, C. 1811. Prodromus systematis Mammalium et Avium additis terminis zoographicis utriusque classis eorumque versonie germanica. xviii, 301 pp. C. Salfeld, Berlin.
- Kuhl, H. 1820. Conspectus Psittacorum. Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae, 10: 1–104, pls. I-III.
- Mathews, G.M. 1917. The birds of Australia, vol. 6, pt. 2. Pp. 105–216. Witherby & Co., London.
- Mayr, G. 2008. The phylogenetic affinities of the parrot taxa *Agapornis, Loriculus* and *Melopsittacus* (Aves: Psittaciformes): hypotarsal morphology supports the results of molecular analyses. *Emu*, 108: 23–27.
- Mayr, G. 2010. Parrot interrelationships morphology and the new molecular phylogenies. *Emu*, 110: 348–357.
- Peters, J.L. 1937. Check-list of birds of the world, vol. 3. xiii, 311 pp. Harvard University Press, Cambridge, Massachusetts.
- Reichenow, A. 1881. Conspectus Psittacorum. Systematische Uebersicht aller bekanten Papageienarten. Journal für Ornithologie, 29: 1–49, 113–177, 225–289, 337–398.
- Salvadori, T. 1891. Catalogue of the Psittaci, or parrots. Catalogue of the birds in the British Museum, vol. 20. xvii, 658 pp. British Museum, London.
- Schodde, R. 1997. Psittacidae. Pp. 109–218 in Houston, W.M.K. & Wells, A. (Eds.), Zoological catalogue of Australia, vol. 37. 2. Aves (Columbidae to Coraciidae). CSIRO Publishing, Melbourne.
- Schweizer, M., Güntert, M., Seehausen, O. & Hertwig, S.T. 2010. The evolutionary diversification of parrots supports a taxon pulse model with multiple trans-oceanic dispersal events and local radiations. *Molecular Phylogenetics and Evolution* 54: 984–994. doi:10.1016/j.ympev.2009.08.021 3.
- Smith, G.A. 1975. Systematics of parrots. Ibis, 117: 18-65.
- Spix, J.B. von. 1824. Avium species novae, quas in itinere per Brasiliam annis MDCCCXVII-MDCCCXX jussu et auspiciis Maximiliani Josephi I. Bavariae Regis suscepto collegit et descripsit, vol. 1. 90, 47 pp. F.S. Hübschmannus, München.
- Swainson, W. 1837. On the natural history and classification of birds, vol. 2. vi, 398 pp. in Lardner, D. (Ed.), *The cabinet cyclopedia*, no. 92. Longman, Rees, Orme, Brown, Green & Longman & John Taylor, London.
- Vigors, N.A. 1825a. On the arrangement of the genera of birds. *The Zoological Journal*, 2: 391–405.
- Vigors, N.A. 1825b. On a group of Psittacidae known to the ancients. *The Zoological Journal*, **2**: 37–65.
- Wagler, J. 1832. Monographia Psittacorum. Abhandlungen der Königl. Bayerischen Akademie der Wissenschaften, München, 1: 463–750.
- Wikipedia. 2011. http://en.wikipedia.org/wiki/True_parrots (accessed 10 January, 2012).
- Wolters, H.U. 1975. Die Vogelarten der Erde, Lief 1. Pp. 1-80. Paul Parey, Hamburg & Berlin.

Wright, T., Schirtzinger, E., Eberhard, J., Graves, G., Sanchez, J., Capelli, S., Muller, H., Scharpegge, J., Chambers, G. & Fleischer, R. 2008. A multilocus molecular phylogeny of the parrots (Psittaciformes): support for a Gondwanan origin during the Cretaceous. *Molecular Biology and Evolution*, 25: 2141–2156.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).